

REMARKS

In response to the Office Action mailed December 11, 2008, Applicants respectfully request reconsideration. Claims 27-34 remain pending for examination with claim 27 being the sole independent claim. No new matter has been added.

I. Rejections Under 35 U.S.C. §103

The Office Action rejects claims 27-34 under 35 U.S.C. §103(a) as allegedly being obvious over Non-Patent Publication "Assembly of a Zn(II)-Porphyrin-Bipyridinium Dyad and Au-Nanoparticles Superstructures on Conductive Surfaces" (hereinafter, "Lahav"). Applicants respectfully traverse each of these rejections.

Lahav fails to teach or suggest a solar battery comprising an optical/electrical conversion element including an optical/electrical conversion layer formed by an assembly of a light-absorbing dendrimer structure operating as an electron donor and fine metal particles operating as an electron receptor, as recited in claim 27. The Office Action asserts that Lahav teaches a light-absorbing dendrimer structure at page 258, column 2, paragraph 2 (Office Action, page 3). Applicants respectfully disagree.

The term dendrimer, as would be known to one of ordinary skill in the art, generally refers to a multi-branched compound comprising a core, interior branches, and terminal branches. Lahav fails to disclose or suggest such a dendrimer. The chemical structure illustrated in Scheme 1 of Lahav is a porphyrin which has been substituted with chemical groups and is not a dendrimer. In contrast, embodiments of the present invention relate to dendrimer structures, for example, comprising a porphyrin core, interior branches comprising phenyl groups, and terminal branches comprising phenyl groups (e.g., Applicants' Specification, Figure 3).

Dendrimer structures provide a long distance between the core of the dendrimer and the outside of the dendrimer. When the core is excited with light, electrons transverse the electron chains of the dendronic site (e.g., the branches of the dendrimer) to migrate over the long distance to the outside of the dendrimer. The long distance between the core and the outside of the dendrimer helps to suppress reverse electron migration and extends the useful life of the charge separated state, thereby helping to

realize efficacious operations of the optical/electrical conversion element (Applicants' Specification page 3, paragraph 2, and page 24, paragraphs 3-4).

Because each limitation of claim 27 is not disclosed or suggested by Lahav, and the Patent Office has failed to provide a clear articulation of any reason to modify Lahav and/or why such modification would result in the invention as claimed, claim 27 is patentable over Lahav for at least these reasons. Claims 28-34 depend from claim 27 and are patentable for at least the same reasons. Accordingly, it is respectfully requested that each of the claim rejections under 35 U.S.C. §103 be withdrawn.

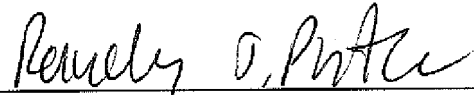
CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed, or which should have been filed herewith to our Deposit Account No. 23/2825 under Docket No. S1459.70066US00.

Dated: February 27, 2009

Respectfully submitted,

By: 
Randy J. Pritzker, Reg. 35,986
WOLF, GREENFIELD & SACKS, P.C.
600 Atlantic Avenue
Boston, MA 02210
Telephone: 617-646-8000

WGS Date: x03/11/09x